

AC/DC Power Supplies

TOP 100 Series, 100 Watt









Features

- ◆ 100 W power supply in 2.0"x 4.0" footprint!
- Full load operation up to +50°C with convection cooling
- Highest efficiency, 90 % typ.
- ◆ EMI filter meets EN 55022, level B
- Compliance with EN 61000-3-2
- Low leakage current
- Safety class I and class II operation
- 3-year product warranty



The new TOP-100 Series AC/DC Power Supplies feature the highest power rating in the industry standard $2.0'' \times 4.0''$ (50.8×101.6 mm) footprint. They can supply up to 100 W output power with convection cooling over an industrial operating temperature range of -25° C to $+50^{\circ}$ C. This performance could be realized by a state of the art design providing an extremely high efficiency of >90 % which eliminates the need for a dedicated power supply cooling fan.

Also see: www.tracopower.com/products/top100_article_e1.pdf

Compliance with global safety and EMC standards qualify these power supplies for worldwide markets. Approved for Class I and Class II applications, these switchers are suitable for industrial and IT systems but also for consumer products. High reliability is provided by use of industrial quality grade components and an excellent thermal management. This product offers an interesting power supply solution for many space and cost critical applications in commercial and industrial electronic equipment.

Models				
Order Code	Output Voltage	Output Current		
	(Adjustment Range)	max.		
TOP 100-105	5.0 VDC (5.0 - 5.2)	20.0 A		
TOP 100-112	12 VDC (12.0 - 13.0)	8.3 A		
TOP 100-115	15 VDC (15.0 - 16.0)	6.7 A		
TOP 100-124	24 VDC (24.0 - 26.0)	4.2 A		
TOP 100-148	48 VDC (48.0 - 52.0)	2.1 A		

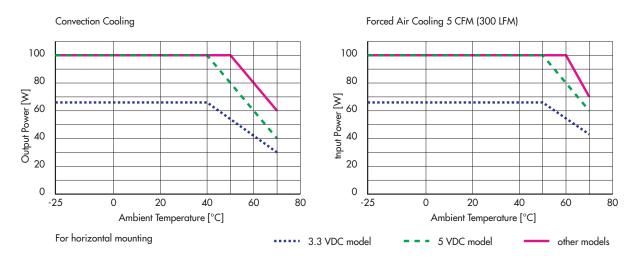
On demand (not for new design in): TOP 100-103 with Output 3.3 VDC (3.3-3.5) / 20.0 A



AC/DC Power Supplies TOP-100 Series 100 Watt

Input voltage range			90 – 132 / 187 – 264 VAC autorange
	p	ower derating at low input voltage:	50 % at 90 VAC - 0 % at 103 VAC
			20 % at 187 VAC – 0 % at 207 VAC
Input frequency			47 – 63 Hz
Input protection			T4 A/250 V internal fuse in both line & neutro
Harmonic limits			EN 61000-3-2, class A
Zero load power consump	tion		3.6 W
Recommended circuit brea	ıker		6 A (characteristic C) or slow blow fuse
Output Specification	ns		
Regulation	– Input and Load va	riation	1.0 % max.
Output voltage adjustment	•		with internal potentiometer
			(for range see model table)
Ripple and noise (20Mhz Bandwidth)			<100 mVp-p
		48 VDC model:	<200 mVp-p
Overvoltage protection		3.3 VDC model:	5.0 V
		5.0 VDC model:	
		12 VDC model:	
		15 VDC model: 24 VDC model:	
		48 VDC model:	
.			
Power back immunity			5.0 V (6.0 V for 1 sec)
			6.3 V (7.0 V for 1 sec)
			16 V (18 V for 1 sec)
			20 V (23 V for 1 sec) 35 V (40 V for 1 sec)
			63 V (68 V for 1 sec)
0	. 15 - 51	46 VDC Model.	<u> </u>
Overload protection by cu	rrent limit		at 150 % lout max.
Short circuit protection			foldback (automatic recovery)
Capacitive load			10′000 μF max.
General Specification	ons		
Operating temperature			-25°C to +70°C with derating

Power derating depending on temperature





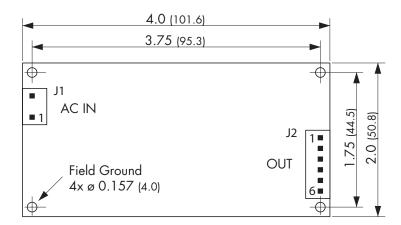
AC/DC Power Supplies TOP-100 Series 100 Watt

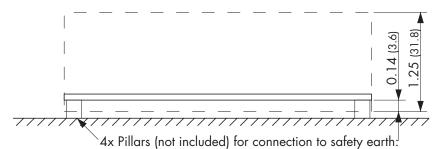
Temperature coefficient Humidity (non condensing)		0.02 %/K 0 – 95 % rel. H max.	
Switching frequency		100 kHz typ. (pulse width modulation)	
Hold-up time	- Vin = 115 VAC - Vin = 230 VAC	10 ms typ. 15 ms typ.	
Start-up time	- Vin = 115 VAC - Vin = 230 VAC	<3.5s <2s	
Isolation voltage	Input / OutputInput / Field GroundOutput / Field Ground	3000 VAC 1500 VAC 500 VAC	
Isolation resistance (at 500 VDC)		100 Mohm min.	
Earth leakage current		250 μA max.	
Reliability, calculated MTBF at +25°C acc. to IEC 61709		www.tracopower.com/products/top100-mtbf.pdf	
Isolation class		class II double isolation	
EMC emissions	Conducted input RI suppressionHarmonic current emissions	EN 55022, class B (conductive plane to be connected to safety earth) IEC / EN 61000-3-2, class A	
EMC immunity	 Electrostatic discharge ESD RF field immunity Electrical fast transients/burst immunity Surge Conducted RF Voltage dip 	IEC / EN 61000-4-2 IEC / EN 61000-4-3 IEC / EN 61000-4-4 IEC / EN 61000-4-5 IEC / EN 61000-4-6 IEC / EN 61000-4-11	
Safety approvals and certifications	 CB certificate (IEC 60950-1) SIQ certificate (EN 60950-1) UL coc (UL 60950-1) CSA certificate (CSA C22.2 No. 60950-1-03) 	www.tracopower.com/products/top100-cb.pdf www.tracopower.com/products/top100-siq.pdf www.tracopower.com/products/top100-ul.pdf www.tracopower.com/products/top100-csa.pdf	
Environment	Vibration acc. IEC 60068-2-6;Shock acc. IEC 60068-2-27	3 axis, sine sweep, 10–55Hz, 1g, 1oct/min 3 axis, 10g half sine, 11msShock 20 G (3 directions each 3 times)	
Environmental compliance	- Reach - RoHS	www.tracopower.com/products/top100-reach.pdf RoHS directive 2011/65/EU	
Connection		pin connector (Molex)	
Weight		140 g (4.9 oz)	

Installation instructions: www.tracopower.com/products/top100-inst.pdf

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Dimensions





Dimensions in Inch, () = mm

Height: 0.2 min. (5.0), Diam.: 0.25 max. (6.0)

To comply with EN 55022 class B:

Field ground (FG) is to be connected to chassis

Input		
Pin	Pin J1	
1	AC in	
2	AC in	

Output		
Pin	J2	
1	– Vout	
2	- Vout	
3	- Vout	
4	+ Vout	
5	+ Vout	
6	+ Vout	

J1: Molex Series 41791 mates with Molex crimp terminal: 08-52-0072 and terminal housing: 09-50-3031

J2: Molex Series 41791

mates with Molex crimp terminal: 08-52-0072 and terminal housing: 09-50-3061